Conclusions: CrCl reduction after PCI is infrequent in patients with normal baseline renal function. A modest decrease in CrCl, even after adjusting for other variables, is associated with significant increases in mortality, bleeding complications and a longer length of hospitalization. The association with intra-aortic balloon pump use suggests an embolic mechanism which warrants further investigation.

1062-43 Preprocedure Hyperglycemia Is Stongly Assoicated With Restenosis After Coronary Intervention in Diabetics

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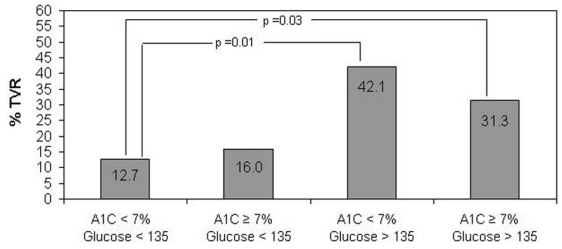
Background: Restenosis rate after percutaneous coronary intervention (PCI) in diabetic pts is at least twice that of nondiabetics. We explored potential relationships between restenosis and metabolic factors in diabetics. **Methods:**Fasting blood samples were obtained from 162 diabetics (98 men, mean age 62.8±10.7) immediately prior to PCI and analyzed for insulin, glucose, and hemoglobin A1c (A1c). Insulin resistance (IR) was calculated from the HOMA formula. All pts had successful PCI. Baseline clinical, procedural and follow-up information was recorded. The primary end point was target vessel revascularization (TVR) rate by 9 months. **Results:**The insulin level was increased in virtually all pts(mean 21.0±15.2 μU/ml). No association between TVR and insulin levels or calculated IR was identified. Only blood glucose level was significantly associated with TVR (p<0.035).This effect was independent of A1c levels (Figure).The 9-month death plus nonfatal infarction rate was low (4.2%). No association with the independent variables could be shown. **Conclusion:**These data do not support a role for either fasting insulin level or calculated IR in restenosis. Glucose levels >135 mg/dl were associated with high TVR rates regardless of A1c levels. The metabolic milieu at the time of the PCI may influence restenosis.



1062-44 Hypothermia, but Not N-Acetylcysteine or Fenoldopam, Prevents Experimental Contrast-Induced Nephropathy

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Background: Contrast-induced nephropathy (CIN) is common after angiographic procedures in high-risk patients. Other than hydration, there is no effective treatment to prevent CIN. We tested the hypothesis that hypothermia would protect the kidneys from CIN.
Methods: We studied a total of 29 rabbits: controls 39°C, pretreatment with N-Acetylcysteine 39°C (NAC, 120 mg/kg over 1 hour, then 11 mg/kg/hr x 4 hours), Fenoldopam 39°C (0.05 μg/kg/hr x 4 hours), and hypothermia (32°C; 35°C). Hypothermia was induced using an esophageal heat exchange catheter (Radiant Medical, Inc). Core temperature was measured in the descending aorta. Rabbits were cooled to target temperature prior to contrast injection, maintained for 3 hours, then rewarmed. NAC was infused starting 2 hours before contrast injection (Fenoldopam 1 hr before). Iopromide (Ultravist,10.0 g I/kg) was injected via femoral vein. Serum creatinine (Cr, mg/dl) was measured at baseline, 24, and 48 hours post injection. Kidneys were removed at 48 hours for histology.
Results: Cr results are shown in the table. Significant increases in Cr and extensive tubular necrosis occurred in controls, NAC, and Fenoldopam, but not in the hypothermic animals.
Conclusions: Hypothermia started prior to contrast injection provided complete protection of the kidneys in this experimental model of CIN, and proved superior to NAC and Fenoldopam. These results suggest that hypothermia may provide a new and effective strategy for prevention of CIN in high-risk patients.

	Cr Baseline	Cr 24 hrs	Cr 48 hrs
Control, 39°C (n=6)	1.1±0.2	3.9±1.8*	5.8±3.3*
NAC (n=6)	0.8±0.1	2.3±0.9*	4.3±1.6*
Fenoldopam (n=6)	1.0±0.2	2.8±1.0*	5.3±1.3*
Hypo-35°C (n=5)	0.8±0.1	1.1±0.2**#	0.9±0.2#
Hypo-32°C (n=6)	1.2±0.2	1.1±0.3#	1.0±0.3#
*P<0.01 vs baseline **P=0.05 vs baseline		#P<0.01 vs Control,NAC, Fenoldopam	

1062-45 Prevention of Contrast-Agent-Induced Nephropathy in Patients Undergoing a Coronary Procedure by Ascorbic Acid

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Background: Contrast agents can cause a reduction in renal function that may be due to generation of reactive oxygen species. There is some evidence suggesting that the administration of the antioxidant acetylcysteine prevents this renal impairment. The action of other antioxidant agents, such as ascorbic acid, has not been investigated.
Methods: We conducted a randomized, double-blind, placebo-controlled, prospective study of ascorbic acid in 231 patients who underwent coronary angiography or intervention and had a serum creatinine concentration > 1.2 mg/dl. Ascorbic acid (3gr at least 2 hours before the procedure, and 2 gr in the night and the morning after the procedure) or placebo was administered orally. An acute contrast-agent-induced reduction in renal function was defined as an at least 0.5 mg/dl or a 25% increase in the baseline serum creatinine concentration measured 2-5 days after the procedure.
Results: Eleven of the 118 patients (9.3%) in the ascorbic acid group, and 23 of the 113 patients (20.4%) in the placebo group achieved the study end-point (p=0.02, relative risk 0.38, 95% confidence interval 0.17 to 0.85). The mean serum creatinine concentration increased significantly in the placebo group [1.36 (SD:0.50) to 1.50 (0.54) mg/dl, p<0.001], but not in the ascorbic acid group [1.46 (0.52) to 1.52 (0.64) mg/dl, p=0.20]. The mean increase in the serum creatinine concentration in the placebo group was greater than that in the ascorbic acid group [0.14 (0.30) vs. 0.06 (0.35) mg/dl, p=0.001].
Conclusion: Prophylactic oral administration of ascorbic acid may protect against contrast-agent-induced nephropathy in high-risk patients undergoing a coronary procedure.

1062-46 Preventive Effects of Rosiglitazone on Restenosis After Coronary Stent Implantation in Patients With Type 2 Diabetes Mellitus

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Background: After coronary stenting, the restenosis rate is known to be higher in DM than non-DM patients due to excessive intimal hyperplasia. We investigated the efficacy of rosiglitazone for preventing restenosis after coronary stenting in diabetic patients.
Methods : We conducted a prospective case-controlled trial involving 95 diabetic patients (control n=48, rosiglitazone (4 mg per day) group n=47) undergoing coronary stenting. Serum glucose level and cholesterol were tried to be optimized using additional hypoglycemic agents and statins. An angiographic follow-up was performed at six months. **Results: A** follow-up angiography was performed in 83 patients including 45 patients with 55 lesions in control group (m:f = 31:11, age 59.9±9.3 years), and 38 patients with 51 lesions in the rosiglitazone group (m:f=24:18, age 60.9±9.3 years). The baseline clinical profile and blood chemistry between two groups were not different. Baseline angiographic data of control and rosiglitazone group were as following : reference diameter 3.15±0.49 vs. 3.16±0.49 mm (p=NS), minimal lumen diameter (MLD) 0.65±0.41 vs. 0.83±0.57 mm (p=NS), diameter stenosis (DS) 79.4±12.8 % vs. 74.4±15.8 %, lesion length 16.48±5.16 vs. 19.02±6.09 mm (p<0.05). There was no difference in MLD or acute gain after coronary stenting between the two groups. The follow-up angiography showed a significantly lower binary restenosis rate in the rosiglitazone group than the control group (17.6% *vs.* 38.2%, *P* = 0.03). The follow-up DS (24.2 ± 23.2% *vs.* 42.9 ± 32.2%, *P* = 0.001) and loss index (0.49±0.41 vs. 0.27±0.30, p=0.008) were also lower in the rosiglitazone group. Major adverse cardiac events occurred less frequently in the rosiglitazone group (10.5% vs 20%, p=0.244) at 6 months, although it was not statistically significant. The serum glucose, insulin, lipid concentrations were similar at 6- month follow-up in the both groups. **Conclusions:** Rosiglitazone effectively reduced restenosis in diabetic patients after coronary stenting. This effect is probably related to pleotrophic property of rosiglitazone rather than its hypoglycemic effect.

1062-47 Marked Improvements in In-Hospital Outcomes Following Contemporary Percutaneous Coronary Intervention in Patients With Diabetes

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Background: Presence of diabetes mellitus (DM) has been associated with adverse results among patients (pts) treated by percutaneous coronary intervention (PCI).
Methods: We sought to determine whether advances in PCI over time have impacted in-hospital clinical outcomes of pts with DM. Pts with DM were identified and analyzed in the 1985-86 PTCA Registry (n=325) and in the 1997-2001 enrollment waves of the NHLBI Dynamic Registry (n=622).
Results: Pts in the Dynamic Registry were older (64.1 vs. 60.7 years, p<0.001), more often had history of hypertension (80.0% vs. 61.8%, p<0.001), severe concomitant noncardiac disease (45.5% vs. 9.5%, p<0.001), and lower LV ejection fractions (50.4% vs. 57.8%, p<0.001). No differences were observed in gender, prior CABG, history of CHF, number of vessels diseased or mean number of lesions. AMI was more often an indication for PCI in the Dynamic Registry (27.7% vs. 7.4%, p<0.001) and procedures were more often emergent or urgent. In the Dynamic Registry, fewer lesions were attempted per pt (1.4 vs. 1.7, p<0.001) and lesion location was less often the LAD (36.8% vs. 45.3%, p<0.05). Stents were used in 87.5% of Dynamic Registry pts and in no 1985-86 pts. Angiographic success was higher in the Dynamic Registry (94.8% vs. 78.1%, p<0.001) and abrupt closure (0.9% vs. 2.2%, p<0.05), death (1.9% vs. 4.3%, p<0.05), MI (1.0% vs. 7.4%, P<0.001) and in-hospital CABG (0.8% vs. 6.2%, p<0.001) were less common.
Conclusions: Although pts with DM having contemporary PCI were older and had more